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FILE 'JAPIO' ENTERED AT 14:40:06 ON 23 MAR 2000

COPYRIGHT (C) 2000 Japanese Patent Office (JPO)

=> s protein (w) "a" and igg (w) bind?

L3 1049 PROTEIN (W) "A" AND IGG (W) BIND?

=> s l3 and viral and vector

L4 6 L3 AND VIRAL AND VECTOR

=> d 1-6 bib ab

L4 ANSWER 1 OF 6 MEDLINE

AN 97399691 MEDLINE

DN 97399691

TI Cell-specific targeting of Sindbis virus vectors displaying IgG-binding domains of protein A.

AU Ohno K; Sawai K; Iijima Y; Levin B; Meruelo D

CS Department of Pathology, New York University Medical Center, NY 10016,
USA.

NC CA68498 (NCI)

CA22247 (NCI)

SO NATURE BIOTECHNOLOGY, (1997 Aug) 15 (8) 763-7.

Journal code: CQ3. ISSN: 1087-0156.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199712

EW 19971203

AB Sindbis virus can infect a broad range of insect and vertebrate cell types

due to the widespread distribution of the cellular receptor for the virus.

The development of Sindbis virus vectors that target specific cell types could have important implications for the design of gene therapy strategies. To achieve this goal we have designed and constructed Sindbis

virus particles displaying the IgG-binding domain of protein A. The protein A-envelope

chimeric Sindbis virus vector has minimal infectivities against baby hamster kidney and human cell lines. When used in conjunction with

monoclonal antibodies that react with cell-surface antigens, however, the

protein A-envelope chimeric virus was able to infect human cell lines with high efficiency. Infection rates were 90% or higher for human lymphoblastoid cells. A variety of cells could be targeted by changing the monoclonal antibody without generating a new recombinant virus.

L4 ANSWER 2 OF 6 MEDLINE

AN 96405036 MEDLINE

DN 96405036

TI Surface display of proteins on bacteriophage lambda heads.

AU Mikawa Y G; Maruyama I N; Brenner S

CS Department of Cell Biology, Scripps Research Institute, La Jolla CA 92037,
USA.

SO JOURNAL OF MOLECULAR BIOLOGY, (1996 Sep 13) 262 (1) 21-30.

Journal code: J6V. ISSN: 0022-2836.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals; Cancer Journals

EM 199612

AB We have developed plasmid and phage vectors for the display of foreign

proteins on the surface of bacteriophage lambda capsid by modifying the D

gene which encodes the major head protein gpD. The vectors have multiple

cloning sites, and permit colour selection and conditional chain termination for recombinants. Displayed proteins can be fused to either the N or C terminus of gpD by a peptide linker. The conditional chain termination scheme, via a host Escherichia coli suppressor activity, allows the fusion and assembly of homomultimeric proteins as well as control of the number of fusion proteins per phage particle. We have successfully displayed beta-lactamase, IgG-binding domains of the Staphylococcus aureus protein A, and beta-galactosidase by cloning the genes into the vector. The constructs express functionally active proteins fused to gpD that assemble

into phage particles. These results suggest that gpD may be fused to many

other peptides and proteins at their N or C terminus and the fusion products may be accessible on the surface of bacteriophage lambda particles.

L4 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2000 ACS

AN 1999:171318 CAPLUS

DN 131:14527

TI Alphaviruses as tools in neurobiology and gene therapy

AU Lundstrom, Kenneth

CS F. Hoffmann-La Roche, Research Laboratories, Basel, CH-4070, Switz.

SO J. Recept. Signal Transduction Res. (1999), 19(1-4), 673-686
CODEN: JRETE; ISSN: 1079-9893

PB Marcel Dekker, Inc.

DT Journal; General Review

LA English

AB A review with 47 refs. The broad host range and superior infectivity of

alphaviruses have encouraged the development of efficient expression

vectors for Semliki Forest virus (SFV) and Sindbis virus (SIN). The generation of high-titer recombinant alphavirus stocks has allowed high-level expression of a multitude of nuclear, cytoplasmic, membrane-assocd. and secreted proteins in a variety of different cell lines and primary cell cultures. Despite the viral cytopathogenic effects, functional assays on recombinant proteins are possible for a time-period of at least 24 h post-infection. The high percentage (80-95%) of primary neurons infected with SFV has allowed localization and functional studies of recombinant proteins in these primary cell cultures. Through multiple infection studies the interaction of receptor and G protein subunits has become feasible. Establishment of efficient scale-up procedures has allowed prodn. of large quantities of recombinant protein. Potential gene therapy applications of alphaviruses could be demonstrated by injection of recombinant SIN particles expressing .beta.-galactosidase into mouse brain. Tissue/cell specific infection has been achieved by introduction of an IgG-binding domain of protein A domain into one of the spike proteins of SIN. This enabled efficient targeting of infection to human lymphoblastoid cells.

L4 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2000 ACS

AN 1998:684981 CAPLUS

DN 129:271533

TI Viral vectors having chimeric envelope proteins containing the IgG-binding domain of protein A

IN Meruelo, Daniel; Ohno, Kouichi

PA New York University, USA

SO PCT Int. Appl., 54 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9844132	A1	19981008	WO 1998-US6237	19980330 W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, GW, HU, ID, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
AU 9865919	A1	19981022	AU 1998-65919	19980330
PRAI US 1997-829558		19970328		
		WO 1998-US6237		19980330

AB The invention involves viral vectors that can be used to transduce a target cell, i.e., to introduce genetic material into the cell. The targets of interest are eukaryotic cells and particularly human cells. The transduction can be done in vivo or \$i(in vitro). More particularly the invention concerns viral vectors that have chimeric envelope proteins and contain the IgG-binding domain of protein A. Vectors were constructed using the gp70 envelope protein of ecotropic murine leukemia virus or the E2 glycoprotein of Sindbis virus. These vectors when used in conjunction with antibodies targeting a particular cell are particularly useful for

gene therapy.

L4 ANSWER 5 OF 6 EMBASE COPYRIGHT 2000 ELSEVIER SCI.

B.V.

AN 1999116942 EMBASE

TI Alphaviruses as tools in neurobiology and gene therapy.

AU Lundstrom K.

CS K. Lundstrom, F. Hoffmann-La Roche, Research Laboratories, CH-4070 Basel, Switzerland

SO Journal of Receptor and Signal Transduction Research, (1999) 19/1-4 (673-686).

Refs: 47

ISSN: 1079-9893 CODEN: JRETE

CY United States

DT Journal; Conference Article

FS 004 Microbiology

008 Neurology and Neurosurgery

022 Human Genetics

LA English

SL English

AB The broad host range and superior infectivity of alphaviruses have encouraged the development of efficient expression vectors for Semliki Forest virus (SFV) and Sindbis virus (SIN). The generation of high-titer recombinant alphavirus stocks has allowed high-level expression of a multitude of nuclear, cytoplasmic, membrane-associated and secreted proteins in a variety of different cell lines and primary cell cultures.

Despite the viral cytopathogenic effects, functional assays on recombinant proteins are possible for a time-period of at least 24 hours postinfection. The high percentage (80-95%) of primary neurons infected with SFV has allowed localization and functional studies of recombinant

proteins in these primary cell cultures. Through multiple infection studies the interaction of receptor and G protein subunits has become feasible. Establishment of efficient scale- up procedures has allowed production of large quantities of recombinant protein. Potential gene therapy applications of alphaviruses could be demonstrated by injection of

recombinant SIN particles expressing .beta.- galactosidase into mouse brain. Tissue/cell specific infection has been achieved by introduction of

an IgG-binding domain of protein A domain into one of the spike proteins of SIN. This enabled efficient targeting of infection to human lymphoblastoid cells.

L4 ANSWER 6 OF 6 JICST-EPlus COPYRIGHT 2000 JST

AN 890503067 JICST-EPlus

TI Expression and purification of the HIV-1 env gene products in Escherichia coli.

AU ZHANG B

CS Okayama Univ., School of Medicine, Cancer Inst.

SO Okayama Igakkai Zasshi, (1989) vol. 101, no. 5-6, pp. 659-672.
Journal

Code: Z0158B (Fig. 7, Ref. 49)

ISSN: 0030-1558

CY Japan

DT Journal; Article

LA Japanese

STA New

AB To purify the HIV-1 envelope protein with antigenic reactivity, the Pvu

II-Bgl II fragment of the HIV-1 env gene, from the Pvu II site to the second Bgl II site, encoding the carboxyl terminal 180 amino acids of the

viral surface protein (SU, gp120) was molecularly cloned in Escherichia coli strain HB101 using protein A expression-shuttle vector pRITS. The pRITS contains the protein A gene, encoding the secretion signal and IgG binding domain of protein A with the upstream promoter and the downstream multicloning sites, as well as the two replication sites for Escherichia coli and Staphylococcus aureus.

A fused protein with the molecular weight of about 55 kilodaltons was produced, which showed the same reactivity as the native protein A against rabbit serum IgG on Western blotting analysis. Most of the fused protein in the periplasmic space was degraded, while the complete fused protein inside the cells was recovered as an insoluble protein. The fused protein was solubilized with sodium dodecyl-sulfate(SDS), partially purified by IgG sepharose affinity chromatography, and completely purified by SDS-polyacrylamide gel electrophoresis. The quantity of the expressed fused protein was estimated about 1% of the total proteins. The purified fused protein contained 516 amino acids with Mr54,976, consisting of 305 amino acids of the IgG binding domain of protein A, 5 amino acids derived from polylinker, a carboxyl terminal 180 amino acids of the HIV-1 envelope surface protein gp120, and 26 amino acids derived from the pUC19 sequence.(author abst.)

=> s igg (w) bind? and vector and transduce and cell#

4 FILES SEARCHED...

L5 1 IGG (W) BIND? AND VECTOR AND TRANSDUCE AND CELL#

=> d bib ab

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2000 ACS

AN 1998:684981 CAPLUS

DN 129:271533

TI Viral vectors having chimeric envelope proteins containing the IgG -binding domain of protein A

IN Meruelo, Daniel; Ohno, Kouichi

PA New York University, USA

SO PCT Int. Appl., 54 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9844132	A1	19981008	WO 1998-US6237	19980330

W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH,
GW, HU, ID, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD,

MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR,

TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI,

FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM,

GA, GN, ML, MR, NE, SN, TD, TG

AU 9865919	A1	19981022	AU 1998-65919	19980330
PRAI US 1997-829558		19970328		
WO 1998-US6237		19980330		

AB The invention involves viral vectors that can be used to transduce a target cell, i.e., to introduce genetic material into the cell. The targets of interest are eukaryotic cells and particularly human cells. The transduction can be done in vivo or *in vitro*. More particularly the invention concerns viral vectors that have chimeric envelope proteins and contain the IgG-binding domain of protein A. Vectors were constructed using the gp70 envelope protein of ecotropic murine leukemia virus or the E2 glycoprotein of Sindbis virus. These vectors when used in conjunction with antibodies targeting a particular cell are particularly useful for gene therapy.

=> s "protein a" and vector and envelope and particle#

6 FILES SEARCHED...

L6 18 "PROTEIN A" AND VECTOR AND ENVELOPE AND PARTICLE#

=> dup rem l6

PROCESSING COMPLETED FOR L6

L7 8 DUP REM L6 (10 DUPLICATES REMOVED)

=> d 1-8 bib ab

L7 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2000 ACS
AN 1999:614108 CAPLUS

DN 131:224467

TI Retroviral packaging cell line and pseudotyped retroviral particles

IN Verma, Inder M.; Kafri, Tal; Bushman, Frederic; Hansen, Mark

PA The Salk Institute for Biological Studies, USA

SO PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9947660	A1	19990923	WO 1999-US5982	19990318
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI US 1998-44085		19980318		
US 1998-148575		19980903		

AB The present invention provides packaging cell lines and recombinant lentiviral or retroviral particles produced therefrom, particularly pseudotyped retroviral particles. The packaging cell lines of the invention are produced by inducibly expressing an

envelope protein by methods described herein. Retroviral particles are produced by inducibly expressing an envelope protein of interest (e.g., a retroviral envelope or the G glycoprotein of vesicular stomatitis virus). Inducible expression of the envelope protein is accomplished by operably linking an envelope protein-encoding nucleotide sequence to an inducible promoter (e.g., a promoter composed of a minimal promoter linked to

at

least one copy of tetO, the binding site for the tetracycline repressor (tetR) of the Escherichia coli tetracycline resistance operon Tn10).

Expression from the inducible promoter is regulated by a transactivating

factor, composed of a first ligand-binding domain that neg. regulates transcription from the inducible promoter (e.g., a prokaryotic tetracycline repressor polypeptide (tetR)). Transcription of the envelope-encoding nucleotide sequence under control of the inducible promoter is activated by a transactivator when tetracycline is absent. The packaging cell line is characterized by a first polypeptide having an HIV genome operably linked to a first inducible promoter wherein

the HIV genome is defective for cis-acting element, for self-replication, and for expression of functional Env protein; a second polynucleotide encoding a functional heterologous Env protein operably

linked to a second inducible promoter; and a third polynucleotide encoding

a regulatable transcriptional activator controlling transcription from the first and second inducible promoters. Also described is a screening assay

for compds. that affect integration of viral nucleic acid into target (e.g., host) nucleic acid. Such compds. are identified based on their effect on viral integrase.

L7 ANSWER 2 OF 8 MEDLINE

DUPLICATE 1

AN 97399691 MEDLINE

DN 97399691

TI Cell-specific targeting of Sindbis virus vectors displaying IgG-binding domains of protein A.

AU Ohno K; Sawai K; Iijima Y; Levin B; Meruelo D

CS Department of Pathology, New York University Medical Center, NY 10016,
USA.

NC CA68498 (NCI)
CA22247 (NCI)

SO NATURE BIOTECHNOLOGY, (1997 Aug) 15 (8) 763-7.
Journal code: CQ3. ISSN: 1087-0156.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199712

EW 19971203

AB Sindbis virus can infect a broad range of insect and vertebrate cell types

due to the widespread distribution of the cellular receptor for the virus. The development of Sindbis virus vectors that target specific cell types could have important implications for the design of gene therapy strategies. To achieve this goal we have designed and constructed Sindbis

virus particles displaying the IgG-binding domain of protein A. The protein A-envelope chimeric Sindbis virus vector has minimal infectivities against baby hamster kidney and human cell lines. When used in conjunction with monoclonal antibodies that react with cell-surface antigens, however, the protein A-envelope chimeric virus was able to infect human cell lines with high efficiency.

Infection rates were 90% or higher for human lymphoblastoid cells. A variety of cells could be targeted by changing the monoclonal antibody without generating a new recombinant virus.

L7 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2000 ACS

DUPLICATE 2

AN 1997:738161 CAPLUS

DN 128:30328

TI Retrovirus vectors displaying the IgG-binding domain of protein A

AU Ohno, Kouichi; Meruelo, Daniel

CS Department of Pathology and Kaplan Cancer Center, New York University
Medical Center, New York, NY, 10016, USA

SO Biochem. Mol. Med. (1997), 62(1), 123-127

CODEN: BMMEF4; ISSN: 1077-3150

PB Academic Press

DT Journal

LA English

AB We have designed and constructed retrovirus particles displaying the IgG-binding domain of protein A. We fused the gene for the synthetic antibody-binding portion of protein A with the envelope gene of ecotropic Moloney murine leukemia virus. The fusion gene was coexpressed in ecotropic retroviral packaging cells, and retrovirus particles with IgG-binding activities were recovered. In principle, the protein A-envelope chimeric retrovirus complexed with specific monoclonal antibody could be used for cell-targeted gene delivery.

L7 ANSWER 4 OF 8 MEDLINE

DUPLICATE 3

AN 97143416 MEDLINE

DN 97143416

TI Characterization of the expression and immunogenicity of poliovirus replicons that encode simian immunodeficiency virus SIVmac239 Gag or

envelope SU proteins.

AU Anderson M J; Porter D C; Moldoveanu Z; Fletcher T M 3rd;
McPherson S;

Morrow C D

CS Department of Microbiology, University of Alabama at Birmingham
35294,
USA.

NC T32-AI 07150 (NIAID)

AI27767 (NIAID)

AI28147 (NIAID)

+

SO AIDS RESEARCH AND HUMAN RETROVIRUSES, (1997 Jan 1) 13 (1) 53-62.

Journal code: ART. ISSN: 0889-2229.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199705

EW 19970504

AB The effectiveness of the poliovirus vaccines to induce both systemic and

mucosal immunity has prompted the development of this virus as a vector in which to express foreign proteins. Our laboratory has previously reported on the construction and characterization of poliovirus

genomes that encode HIV-1 proteins (Porter DC, et al.: J Virol 1996;70:2643-2649). To develop this system further, we have constructed

poliovirus genomes, referred to as replicons, which encode the SIVmac239

Gag or Env SU in place of the poliovirus capsid gene (P1). Since the replicons do not encode capsid proteins, they are encapsidated into poliovirus by passage with a recombinant vaccinia virus, VVP1, which provides the poliovirus capsid proteins in trans. Using this system, we have derived stocks of the encapsidated replicons which encode the SIVmac239 or Env SU protein. Infection of cells with the replicon that encodes SIVmac239 Gag resulted in the expression of a 55-kDa protein that

was released from the infected cells. Analysis of the sedimentation of the

released proteins by sucrose density gradient centrifugation revealed that

the protein was released from the cell in the form of a virus-like particle. Infection of cells with the replicons encoding the SIVmac239 Env SU resulted in the expression of a 63-kDa protein, corresponding to the molecular mass predicted for the nonglycosylated SIVmac239 SU protein. A second protein with a molecular mass greater than 160 kDa was also immunoprecipitated.

After

enzymatic deglycosylation, this protein migrated at a molecular mass consistent with that for an Env SU dimer. Analysis of the medium from cells infected with the replicon encoding SIVmac239 Env SU revealed the

presence of a protein of molecular mass 85-90 kDa, possibly representing a

fragment of the SIVmac239 or Env SU protein. To determine the immunogenicity of the replicons encoding SIVmac239 Gag or Env SU, transgenic mice that express the human receptor for poliovirus, and are thus susceptible to poliovirus, were immunized via the intramuscular route. A serum antibody response to SIV envelope was detected following booster immunization, establishing that the encapsidated replicon was immunogenic. Finally, we demonstrate that the replicons have

the capacity to infect peripheral blood mononuclear monocytes/macrophages,

suggesting that this cell is a possible target for in vivo infection. The results of our studies, then, lend further support for the development and

application of recombinant poliovirus replicons in a vaccine strategy.

L7 ANSWER 5 OF 8 MEDLINE

DUPLICATE 4

AN 97030199 MEDLINE

DN 97030199

TI Foreign glycoproteins expressed from recombinant vesicular stomatitis

viruses are incorporated efficiently into virus particles.

AU Schnell M J; Buonocore L; Kretzschmar E; Johnson E; Rose J K

CS Department of Pathology, Yale University School of Medicine, New Haven, CT
06510, USA.

NC R37AI24345 (NIAID)

SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF

AMERICA, (1996 Oct 15) 93 (21) 11359-65.

Journal code: PV3. ISSN: 0027-8424.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals; Cancer Journals

EM 199702

EW 19970204

AB In a previous study we demonstrated that vesicular stomatitis virus (VSV)

can be used as a vector to express a soluble protein in mammalian cells. Here we have generated VSV recombinants that express four

different membrane proteins: the cellular CD4 protein, a

CD4-G hybrid protein containing the ectodomain of CD4 and the transmembrane and cytoplasmic tail of the VSV glycoprotein (G), the measles virus hemagglutinin, or the measles virus fusion protein. The proteins were expressed at levels ranging from 23-62% that of VSV G protein and all were transported to the cell surface. In addition we found

that all four proteins were incorporated into the membrane envelope of VSV along with the VSV G protein. The levels of incorporation of these proteins varied from 6-31% of that observed for VSV

G. These results suggest that many different membrane proteins may be

co-incorporated quite efficiently with VSV G protein into budding VSV

virus particles and that specific signals are not required for this co-incorporation process. In fact, the CD4-G protein was incorporated

with the same efficiency as wild type CD4. Electron microscopy of virions

containing CD4 revealed that the CD4 molecules were dispersed throughout

the virion envelope among the trimeric viral spike glycoproteins. The recombinant VSV-CD4 virus particles were about 18% longer than wild type virions, reflecting the additional length

of the helical nucleocapsid containing the extra gene. Recombinant VSVs

carrying foreign antigens on the surface of the virus particle may be useful for viral targeting, membrane protein purification, and for

generation of immune responses.

L7 ANSWER 6 OF 8 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.

AN 96158686 EMBASE

DN 1996158686

TI Poliovirus replicons that express the Gag or the envelope surface protein of simian immunodeficiency virus SIV(smm) PBj14.

AU Anderson M.J.; Porter D.C.; Fultz P.N.; Morrow C.D.

CS Department of Microbiology, University of Alabama,Birmingham, AL 35294,

United States

SO Virology, (1996) 219/1 (140-149).

ISSN: 0042-6822 CODEN: VIRLAX

CY United States

DT Journal; Article

FS 004 Microbiology

026 Immunology, Serology and Transplantation

037 Drug Literature Index

LA English

SL English

AB Poliovirus genomes encoding the complete gag or env surface gene of the

simian immunodeficiency virus SIV(smm) PBj 14 (SIV-PBj14) were constructed. The in vitro-transcribed RNA from these genomes, referred to

as replicons, have the capacity for self-replication when transfected into

tissue culture cells. Serial passage of the replicons containing the SIV-PBj14 gag or SIV-PBj14 env (SU) genes with a recombinant vaccinia

virus, VV-P1, which provides P1 in trans, resulted in the encapsidation of

these replicons. Infection of cells with the encapsidated replicons that encode gag, referred to as vIC-SIV-PBj14 Gag, resulted in the production

of a 55-kDa protein that was released from the infected cells. Using a

sucrose density-gradient analysis, the protein was found to sediment at

a density consistent with that of a virus-like particle. Infection of cells with a replicon that encodes the env SU gene, referred to as vIC-SIV-PBj14 SU, resulted in the production of two SIV-PBj14 envelope-related intracellular proteins. One of these proteins had a molecular mass consistent with that of the unglycosylated SIV-PBj14

SU protein (63 kDa); the second protein had a higher molecular mass (> 160

kDa). Characterization of this larger protein revealed that it was glycosylated and possibly represented a dimer of the SU protein. A pulse-chase analysis of cells infected with vIC-SIV-PBj14 SU demonstrated that a 110- to 130-kDa protein was released, which is consistent with the molecular mass of the SIV-PBj14 SU protein. The results of these studies demonstrate that poliovirus replicons can be used to express foreign proteins, including glycoproteins, which retain many of the physical features of the native protein.

L7 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2000 ACS

AN 1996:113436 CAPLUS

DN 124:167506

TI Eukaryote transduced with retrovirus vector particle containing envelope protein, ltr, and therapeutic agent and use of vector for gene therapy

IN Vanin, Elio F.; Nienhuis, Arthur W.

PA United States Dept. of Health and Human Services, USA

SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 9534639 A1 19951221 WO 1995-US7385 19950609
W: CA, JP

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE

US 5710037 A 19980120 US 1994-258420 19940610

PRAI US 1994-258420 19940610

AB A retroviral vector which includes a nucleic acid sequence encoding a retroviral envelope. The nucleic acid sequence encoding a retroviral envelope includes a first nucleic acid sequence encoding a first envelope portion which is a portion of MCF viral gp 70 protein, a nucleic acid sequence which encodes xenotropic envelope, a nucleic acid sequence which encodes an amphotropic envelope portion, and a nucleic acid sequence which encodes p15E protein. Such retroviral envelopes encoded by such nucleic acid sequence may be included in infectious viral particles. The infectious viral particles also may include gene(s) encoding therapeutic agents, and thus may be used in gene therapy.

L7 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2000 ACS

AN 1993:118249 CAPLUS

DN 118:118249

TI Enrichment method for variant proteins with altered binding properties

IN Garrard, Lisa J.; Henner, Dennis J.; Bass, Steven; Greene, Roland; Lowman,

Henry B.; Wells, James A.; Matthews, David J.

PA Genentech, Inc., USA

SO PCT Int. Appl., 101 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 5

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 9209690 A2 19920611 WO 1991-US9133 19911203
W: CA, JP, US
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE
CA 2095633 AA 19920604 CA 1991-2095633 19911203
EP 564531 A1 19931013 EP 1992-902109 19911203
EP 564531 B1 19980325
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE
JP 07503600 T2 19950420 JP 1991-502710 19911203
AT 164395 E 19980415 AT 1992-902109 19911203
ES 2113940 T3 19980516 ES 1992-902109 19911203
US 5750373 A 19980512 US 1993-50058 19930430
US 5688666 A 19971118 US 1994-182530 19940114
US 5780279 A 19980714 US 1995-418928 19950405
US 5846765 A 19981208 US 1995-441871 19950516
US 6040136 A 20000321 US 1997-923854 19970903

PRAI US 1990-621667 19901203

US 1991-683400 19910410
US 1991-715300 19910614
US 1991-743614 19910808
US 1988-264611 19881028
US 1991-682400 19910410
WO 1991-US9133 19911203
US 1992-864452 19920419
US 1993-50058 19930430
US 1993-161692 19931203
US 1995-418928 19950405
US 1995-463587 19950605

AB A method for selecting variants of proteins such as growth hormone and

antibody fragment with altered binding properties for their resp. receptor

mols. is provided. The method comprises fusing a gene encoding a protein

of interest to at least a portion of the gene for a phage coat protein, e.g. for the C-terminal domain of the gene III coat protein of M13 under

control of a transcription-regulating element. The vector is mutated at .gtoreq.1 position within the 1st gene (e.g. by oligonucleotide-directed mutagenesis), and host cells are transformed with

the mutant vector and a helper phage having the coat protein gene. Recombinant phagemid particles are formed contg. at least part of the mutant expression vector and capable of transforming the host; conditions are adjusted so that most phagemid particles do not display >1 copy of the fusion protein on the particle surface. The phagemid particles are screened for binding to the target mol. These steps may be repeated. Phagemids presenting human

growth hormone (hGH)-gene III protein fusion proteins prep'd. as above were

fractionated chromatog. on immobilized hGH-binding protein; a single cycle of binding and elution gave >5000-fold enrichment.

=> index biotechnology

INDEX 'ADISALERTS, ADISINSIGHT, AGRICOLA, AIDSLINE, ANABSTR, AQUASCI, BIOBUSINESS, BIOMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA,

CANCERLIT, CAPLUS, CEABA, CEN, CIN, CONFSCI, CROPB,
CROPJ, DDFB, DDFU,
DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...
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56 FILES IN THE FILE LIST IN STNINDEX

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1 FILE AIDSLINE
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L10 16 DUP REM L9 (10 DUPLICATES REMOVED)

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L10 ANSWER 1 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT
INFORMATION LTD
AN 2000-02998 BIOTECHDS
TI Producing retro virus particles from recombinant, defective

adenoviruses, useful for gene therapy or vaccination;
recombinant virus vector production from mutant adenovirus
vector for e.g. cancer and autoimmune disease gene therapy in
recombinant vaccine and animal model construction

AU Torrent C; Yeh P; Perricaudet M; Klatzmann D; Salzmann J L
PA Rhone-Poulenc-Rorer, Genopoietic

LO Antony, France; Paris, France.

PI WO 9960144 25 Nov 1999

AI WO 1999-FR1184 18 May 1999

PRAI FR 1998-6258 18 May 1998

DT Patent

LA French

OS WPI: 2000-072443 [06]

AB A composition (A) which consists of all the genetic elements needed
to

construct a retro virus particle, incorporated into one or more
recombinant adenoviruses that are defective for at least part or all of
the E1 and E4 regions, is new. Also claimed are: a recombinant adenovirus
(AdV1) defective for at least part or all of the E1 and E4 regions,
containing one or more nucleic acids encoding retro virus gag and pol
proteins; a recombinant defective adenovirus (AdV2) containing a
nucleic

acid encoding an envelope protein, a
nucleic acid containing a retro virus packaging sequence, between 2
partial or complete long terminal repeats (LTR) and a sequence of
interest; cells modified using (A), which may be used to produce an
agent

for nucleic acid transfer in vivo; and the in vitro production of retro
virus particles via incubation of the cells in the presence of
(A). (A) may be useful for the in vitro and ex vivo production of retro
virus particles, which are in turn useful for gene transfer, for
e.g. creating animal models of disease, in recombinant vaccines and in
gene therapy of e.g. autoimmune diseases and cancer. (72pp)

L10 ANSWER 2 OF 16 TOXLIT

AN 1999:72458 TOXLIT

DN CA-131-224467U

TI Retroviral packaging cell line and pseudotyped retroviral
particles.

AU Verma IM; Kafri T; Bushman F; Hansen M

SO (1999). PCT Int. Appl. PATENT NO. 9947660 09/23/1999 (The Salk
Institute

for Biological Studies).

CODEN: PIXXD2.

CY UNITED STATES

DT Patent

FS CA

LA English

OS CA 131-224467

EM 199910

AB The present invention provides packaging cell lines and recombinant
lentiviral or retroviral particles produced therefrom,
particularly pseudotyped retroviral particles. The packaging
cell lines of the invention are produced by inducibly expressing an
envelope protein by methods described herein. Retroviral
particles are produced by inducibly expressing an envelope
protein of interest (e.g., a retroviral envelope or the G
glycoprotein of vesicular stomatitis virus). Inducible expression of the
envelope protein is accomplished by operably linking an
envelope protein-encoding nucleotide sequence to an inducible
promoter (e.g., a promoter composed of a minimal promoter linked to
at

least one copy of tetO, the binding site for the tetracycline repressor
(tetR) of the Escherichia coli tetracycline resistance operon Tn10).
Expression from the inducible promoter is regulated by a
transactivating
factor, composed of a first ligand-binding domain that neg. regulates

transcription from the inducible promoter (e.g., a prokaryotic tetracycline repressor polypeptide (*tetR*)). Transcription of the envelope-encoding nucleotide sequence under control of the inducible promoter is activated by a transactivator when tetracycline is absent. The packaging cell line is characterized by a first polypeptide having an HIV genome operably linked to a first inducible promoter wherein

the HIV genome is defective for cis-acting element, for self-replication, and for expression of functional Env protein; a second polynucleotide encoding a functional heterologous Env protein operably linked to a second inducible promoter; and a third polynucleotide encoding a regulatable transcriptional activator controlling transcription from the first and second inducible promoters. Also described is a screening assay for compds. that affect integration of viral nucleic acid into target (e.g., host) nucleic acid. Such compds. are identified based on their effect on viral integrase.

L10 ANSWER 3 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1999-01649 BIOTECHDS

TI Virus-like particles useful as gene-, antigen- or epitope-delivery vehicles;
derived from corona virus with biologically active proteins associated
with the virus-like particle other than natural ectodomain,
used for gene delivery, drug delivery, etc

AU Rottier P J

PA Univ.Utrecht

LO Utrecht, The Netherlands.

PI WO 9849195 5 Nov 1998

AI WO 1998-N

L237 29 Apr 1998

PRAI EP 1997-201292 29 Apr 1997

DT Patent

LA English

OS WPI: 1999-024045 [02]

AB Corona virus virus-like particles are claimed possessing a biologically active targetting protein associated on its surface other than the natural corona virus spike protein, endo or ectodomain. The virus-like particles are derived from genetically modified or protein modified corona viruses. They are useful as gene-, antigen- or epitope-delivery vehicles (claimed), used in therapy, as immunogens or

vaccines and for diagnostics. They provide for the targeted delivery of therapeutic agents to the body. Preferably, the particle is attenuated and provided with a corona virus genome in which a gene sequence has been deleted. The targetting means may be a viral envelope protein, at least part of a spike protein, a CD4 molecule, hormone, enzyme, toxin, etc., but especially is a single-chain antibody fragment. In an example, a recombinant mouse hepatitis virus strain A59 with chimeric spikes was generated using the targetting of mouse corona virus to cat whole fetus (FCWF-D) cells.

The effect of the recombination was evident from the formation of large syncytia by the cat cells. (38pp)

L10 ANSWER 4 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1999-00130 BIOTECHDS

TI New viral vectors for transducing target cells;
virus vector used to transduce specific target cell type

AU Meruelo D; Ohno K

PA Univ.New-York

LO New York, NY, USA.

PI WO 9844132 8 Oct 1998

AI WO 1998-US6237 30 Mar 1998

PRAI US 1997-829558 28 Mar 1997

DT Patent

LA English

OS WPI: 1998-557124 [47]

AB A virus vector used to transduce a target cell is claimed. The vector contains a gene encoding a chimeric envelope protein (CEP) that contains a portion of an IgG-binding domain of protein-A. The CEP is viral in origin, directs the assembly of the fragment into a virus particle, and is preferably derived from a retro virus. Alternatively the CEP is an alpha

virus envelope protein, that directs the virus particle assembly, and directs the virus particle to a specific cellular receptor. Preferably the CEP contains a cytokine, or cytokine fragment,

particularly a transforming growth factor. Also claimed is a virus complex which contains a gene of interest under the control of a viral sequence, and a CEP containing a portion of an IgG-binding domain of protein-A. The IgG-binding domain is expressed on the surface of the envelope protein, and the complex preferably also includes an antibody specific for a particular cell. Alternatively the virus complex may contain a chimeric alpha virus envelope protein, particularly of Sindbis virus origin. The claims extend to a means of expressing a gene of interest in a target cell by contacting the cell with the virus complex. (53pp)

L10 ANSWER 5 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1998-05286 BIOTECHDS

TI New packaging cell lines for pseudotyped retro viral vectors;
packaging cell culture for retro virus vector

AU Miyanohara A; Yee J K; Chen S T; Prussak C E; Friedmann T

PA Univ.California; City-of-Hope

LO Oakland, CA, USA; Duarte, CA, USA.

PI WO 9805759 12 Feb 1998

AI WO 1997-US13846 6 Aug 1997

PRAI US 1996-694652 7 Aug 1996

DT Patent

LA English

OS WPI: 1998-145602 [13]

AB A eukaryotic cell for packaging a pseudotyped retro virus vector is claimed. It comprises: a stably chromosomally-integrated 1st nucleotide sequence (NS1) encoding a retro virus Gag protein; a stably chromosomally-integrated 2nd nucleotide sequence (NS2) encoding a retro virus Pol protein; and a 3rd nucleotide sequence encoding an envelope protein operably linked to an inducible promoter, from where transcription from the promoter is regulated by

a multichimeric transactivator (MTA), whereupon introduction of a retro virus RNA genome into the packaging cell and induction of expression from

the inducible promoter, the packaging cell produces infectious retro virus particles at a titer of at least 10,000 cfu/ml within 4 days. The MTA comprises a 1st ligand-binding domain (LBD), where binding

of a ligand to this domain inhibits transcriptional activation by the MTA, a eukaryotic transcriptional activation domain, and a 2nd LBD.

Also

claimed are: a pseudotyped retro virus particle produced in the packaging cell culture; the packaging cell culture derived from Cf2Th cell; NS1 and NS2 encoding Gag and Pol; and a method for producing

a recombinant retro virus vector particle. (84pp)

L10 ANSWER 6 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1999-02847 BIOTECHDS

TI DNA constructs for inhibiting infectious virus production; HIV virus-like **particle** containing ribozyme, CD4 ectodomain and vesicular-stomatitis virus G-protein or HIV virus envelope protein gene, used for infection or AIDS gene therapy

AU Schubert M; Harmison II G G; Chen C J; Banjerjea A

PA U.S. Dep. Health-Hum. Serv.

LO Washington, DC, USA.

PI US 5847096 8 Dec 1998

AI US 1995-418848 7 Apr 1995

PRAI US 1995-418848 7 Apr 1995

DT Patent

LA English

OS WPI: 1999-059150 [05]

AB A DNA construct that encodes a chimeric protein is new and contains a

chimeric gene linked to at least one HIV virus LTR-promoter sequence,

where the chimeric gene contains a 1st sequence encoding the ectodomain

portion of the CD4-protein and a 2nd sequence encoding the transmembrane

and cytoplasmic portions of an **envelope protein** (e.g. a vesicular-stomatitis virus G-protein or an HIV virus **envelope protein**). Also included in the construct are multi-target ribozymes. Also claimed are: a DNA construct that encodes a complete CD4-**protein**; a DNA construct selected from DIRz27, MONORz37, MONORz6, NONARz63-6, PENTARz51 and PENTARz63; and DNA

constructs HDPACK1 (7,399 bp) and HD1(T7) (2,940 bp). DNA constructs

HD2, HD3, HD4, HD5 and HD6 can also be used. A composition containing

the DNA construct can be used to treat a patient infected with a HIV virus. Also disclosed are: the potential therapeutic use of the HIV **particles** against AIDS; a **viral particle** which interferes with the replication of a retro virus present in a host cell; and a host cell (e.g. H9, CEM or HeLa). (106pp)

L10 ANSWER 7 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1998-10812 BIOTECHDS

TI DNA construct for expressing modified foamy virus envelope protein;

for producing FV-pseudotyped retro virus vectors

AU Rethwilm A; Lindemann D

PA Transgene

LO Cedex, France.

PI EP 864652 16 Sep 1998

AI EP 1997-400573 14 Mar 1997

PRAI EP 1997-400573 14 Mar 1997

DT Patent

LA English

OS WPI: 1998-469236 [41]

AB A DNA construct for the expression of a modified foamy virus (FV)

envelope protein is claimed. Also claimed are: a protein expressed by the construct; a pseudotyped virus **particle** containing a FV **envelope protein**; a

complementation cell line containing the construct; a method for producing the pseudotyped viral **particle** comprising introducing a recombinant retro virus vector into the complementation cell line, culturing and recovering the pseudotyped viral **particle** from the culture; and a mammal cell infected with the pseudotyped viral

particle. FV-pseudotyped retro virus vectors or mammalian cells infected with them can be used for vaccination or gene therapy e.g. of genetic disorders, cancer or virus-induced disease. The broad host range

of FVs, their resistance to inactivation by human serum, and their ability to efficiently infect various cell types, should make mouse leukemia virus (preferred) (MuLV)-based retro virus vectors pseudotyped

with the HFV-D2MuLV (HFV envelope protein with the cytoplasmic domain partly deleted and fused to a MuLV domain) chimeric **envelope protein** a useful tool for efficient gene transfer into various cell types. (18pp)

L10 ANSWER 8 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1998-01001 BIOTECHDS

TI New isolated porcine retro virus; pig recombinant retro virus production and sense and antisense nucleic

acid for use in recombinant vaccine, therapy and gene therapy

AU Galbraith D N; Haworth C; Lees G M; Smith K T

PA Q-One-Biotech; Imutran

LO Glasgow, UK; Cambridge, UK.

PI WO 9740167 30 Oct 1997

AI WO 1997-GB1087 18 Apr 1997

PRAI GB 1997-2668 10 Feb 1997; GB 1996-8164 19 Apr 1996

DT Patent

LA English

OS WPI: 1997-535851 [49]

AB A new isolated nucleic acid molecule encoding at least one pig retro virus (PoEV) expression product (DNA sequence and protein sequence

specified), preferably a polymerase, the virion core protein (GAG) and/or

envelope protein (ENV), can be contained on a virus or plasmid vector and used to transform a prokaryotic or eukaryotic host cell for production of a recombinant PoEV protein, which may be used as a

vaccine. Also claimed is an antibody or fragment capable of binding to

the protein, a DNA primer, a DNA probe and a pig modified so as not to express an infectious PoEV capable of infecting humans. The DNA primer or probe may be used to detect PoEV in a sample.

The nucleic acid, antisense nucleic acid, protein or cells, tissues or organs from the modified pig may be used in therapy or diagnosis. In an

example, 500 ml supernatant derived from exponentially growing pig kidney

cells (PK-15, ATCC CCL33) was centrifuged to pellet virus particles. RNA was prepared from the viral pellet and used to prepare cDNA. The cDNA was digested, cloned into plasmid pZErO, purified and sequenced. (69pp)

L10 ANSWER 9 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1997-10341 BIOTECHDS

TI Cell-specific targeting of Sindbis virus vectors displaying IgG-binding

domains of protein-A;

for use in gene therapy

AU Ohno K; Sawai K; Iijima Y; Levin B; *Meruelo D

CS Univ.New-York

LO Department of Pathology and Kaplan Cancer Center, New York University

Medical Center, 550 First Avenue, New York, NY 10016, USA.

Email: merue01@mcrcc.med.nyu.edu
SO Mat.Biotechnol.; (1997) 15, 8, 763-67 ISSN: 1087-0156
DT Journal
LA English
AB Sindbis virus vectors targeting specific cell types were constructed, for possible use in gene therapy. Sindbis virus particles displaying the IgG-binding domain of Staphylococcus aureus protein-A were constructed, with minimal infectivity against BHK and human cell lines. Modified Sindbis virus helper vectors plasmid DH-BB-Bst and DH-BB-ZZ were co-transfected with plasmid SinRep/LacZ, and used for expression of an Escherichia coli beta-galactosidase (EC-3.2.1.23) reporter gene. When used with monoclonal antibodies (MAbs) reacting with cell surface antigens, the protein-A-envelope chimeric virus was able to infect human cell lines with high efficiency. Infection rates were 90% or higher for human lymphoblastoid Daudi and HL-60 cells. Various cell types could be targeted by changing the MAb without generating a new recombinant virus. (25 ref)

L10 ANSWER 10 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1998-03286 BIOTECHDS
TI Retro virus vectors displaying the IgG-binding domain of protein -A; for use in gene therapy
AU Ohno K; *Meruelo D
CS Univ.New-York
LO Kaplan Cancer Center, New York University Medical Center, 560 First Avenue, New York, NY 10016, USA.
SO Biochem.Mol.Med.; (1997) 62, 1, 123-27
CODEN: BMMEF ISSN: 1077-3150
DT Journal
LA English
AB Retro virus vector particles displaying the IgG-binding domain of protein-A were constructed. An artificial gene encoding the antibody-binding portion of protein -A was fused with an ecotropic mouse Moloney leukemia virus envelope gene. Two IgG-binding domains were amplified by polymerase chain reaction using plasmid pEZ218 as template. Products were digested with BstEII and EcoRI, and were used to replace the virus env gene in a p439 vector. Genes were used for transient transfection of COS-7 cells by lipofection. The fusion gene was co-expressed in an ecotropic psi-2 retro virus packaging cell culture, and retro virus particles with IgG-binding activities were recovered. The protein-A-envelope chimeric retro virus complexed with a specific monoclonal antibody could be useful in cell-targeted gene delivery, e.g. for gene therapy. (13 ref)

L10 ANSWER 11 OF 16 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.DUPLICATE
AN 1997:27002969 BIOTECHNO
TI Characterization of the expression and immunogenicity of poliovirus replicons that encode Simian immunodeficiency virus SIV(mac)239 gag or envelope SU proteins
AU Anderson M.J.; Porter D.C.; Moldoveanu Z.; Fletcher III T.M.; McPherson S.; Morrow C.D.

CS C.D. Morrow, Department of Microbiology, 619 Lyons-Harrison Research Bldg., University of Alabama, 1900 Seventh Avenue South, Birmingham, AL 35294-0007, United States.
SO AIDS Research and Human Retroviruses, (1997), 13/1 (53-62), 36 reference(s)
CODEN: ARHRE7 ISSN: 0889-2229
DT Journal; Article
CY United States
LA English
SL English
AB The effectiveness of the poliovirus vaccines to induce both systemic and mucosal immunity has prompted the development of this virus as a vector in which to express foreign proteins. Our laboratory has previously reported on the construction and characterization of poliovirus genomes that encode HIV-1 proteins (Porter DC, et al.: J Virol 1996;70:2643-2649). To develop this system further, we have constructed poliovirus genomes, referred to as replicons, which encode the SIV(mac)239 Gag or Env SU in place of the poliovirus capsid gene (P1). Since the replicons do not encode capsid proteins, they are encapsidated into poliovirions by passage with a recombinant vaccinia virus, VVP1, which provides the poliovirus capsid proteins in trans. Using this system, we have derived stocks of the encapsidated replicons which encode the SIV(mac)239 Gag or Env SU protein. Infection of cells with the replicon that encodes SIV(mac)239 Gag resulted in the expression of a 55-kDa protein that was released from the infected cells. Analysis of the sedimentation of the released proteins by sucrose density gradient centrifugation revealed that the protein was released from the cell in the form of a virus-like particle. Infection of cells with the replicons encoding the SIV(mac)239 Env SU resulted in the expression of a 63-kDa protein, corresponding to the molecular mass predicted for the nonglycosylated SIV(mac)239 SU protein. A second protein with a molecular mass greater than 160 kDa was also immunoprecipitated. After enzymatic deglycosylation, this protein migrated at a molecular mass consistent with that for an Env SU dimer. Analysis of the medium from cells infected with the replicon encoding SIV(mac)239 Env SU revealed the presence of a protein of molecular mass 85-90 kDa, possibly representing a fragment of the SIV(mac)239 Env SU protein. To determine the immunogenicity of the replicons encoding SIV(mac)239 Gag or Env SU, transgenic mice that express the human receptor for poliovirus, and are thus susceptible to poliovirus, were immunized via the intramuscular route. A serum antibody response to SIV envelope was detected following booster immunization, establishing that the encapsidated replicon was immunogenic. Finally, we demonstrate that the replicons have the capacity to infect peripheral blood mononuclear monocytes/macrophages, suggesting that this cell is a possible target for in vivo infection. The results of our studies, then, lend further support for the development and application of recombinant poliovirus replicons in a vaccine strategy.

L10 ANSWER 12 OF 16 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.DUPLICATE

AN 1996:26347126 BIOTECHNO

TI Foreign glycoproteins expressed from recombinant vesicular stomatitis

viruses are incorporated efficiently into virus particles

AU Schnell M.J.; Buonocore L.; Kretzschmar E.; Johnson E.; Rose J.K.

CS Department of Pathology, Yale University School of Medicine, 310 Cedar

Street, New Haven, CT 06510, United States.

SO Proceedings of the National Academy of Sciences of the United States of

America, (1996), 93/21 (11359-11365)

CODEN: PNASA6 ISSN: 0027-8424

DT Journal; Conference Article

CY United States

LA English

SL English

AB In a previous study we demonstrated that vesicular stomatitis virus (VSV)

can be used as a vector to express a soluble protein in mammalian cells. Here we have generated VSV recombinants that express

four different membrane proteins: the cellular CD4 protein, a CD4-G hybrid protein containing the ectodomain of CD4 and the transmembrane and cytoplasmic tail of the VSV glycoprotein (G), the measles virus hemagglutinin, or the measles virus fusion protein. The proteins were expressed at levels ranging from 23- 62% that of VSV

G protein and all were transported to the cell surface. In addition we found that all four proteins were incorporated into the membrane envelope of VSV along with the VSV G protein. The levels of incorporation of these proteins varied from 6-31% of that observed for VSV G. These results suggest that many different membrane proteins may be

co-incorporated quite efficiently with VSV G protein into budding VSV

virus particles and that specific signals are not required for this co-incorporation process. In fact, the CD4-G protein was incorporated with the same efficiency as wild type CD4. Electron microscopy of virions containing CD4 revealed that the CD4 molecules were

dispersed throughout the virion envelope among the trimeric viral spike glycoproteins. The recombinant VSV-CD4 virus particles were about 18% longer than wild type virions, reflecting the additional length of the helical nucleocapsid containing the extra gene. Recombinant VSVs carrying foreign antigens on the surface

of the virus particle may be useful for viral targeting, membrane protein purification, and for generation of immune responses.

L10 ANSWER 13 OF 16 BIOTECHNO COPYRIGHT 2000 Elsevier Science B.V.

AN 1996:26180391 BIOTECHNO

TI Poliovirus replicons that express the Gag or the envelope

surface protein of simian immunodeficiency virus SIV(smm) PBj14

AU Anderson M.J.; Porter D.C.; Fultz P.N.; Morrow C.D.

CS Department of Microbiology, University of Alabama, Birmingham, AL 35294,

United States.

SO Virology, (1996), 219/1 (140-149)

CODEN: VRLAX ISSN: 0042-6822

DT Journal; Article

CY United States

LA English

SL English

AB Poliovirus genomes encoding the complete gag or env surface gene of the

simian immunodeficiency virus SIV(smm) PBj 14 (SIV-PBj14) were constructed. The in vitro-transcribed RNA from these genomes, referred to

as replicons, have the capacity for self-replication when transfected into tissue culture cells. Serial passage of the replicons containing the SIV-PBj14 gag or SIV-PBj14 env (SU) genes with a recombinant vaccinia

virus, VV-P1, which provides P1 in trans, resulted in the encapsidation

of these replicons. Infection of cells with the encapsidated replicons that encode gag, referred to as vIC-SIV-PBj14 Gag, resulted in the production of a 55-kDa protein that was released from the infected cells.

Using a sucrose density-gradient analysis, the protein was found to sediment at a density consistent with that of a virus-like particle. Infection of cells with a replicon that encodes the env SU gene, referred to as vIC-SIV-PBj14 SU, resulted in the production of

two SIV-PBj14 envelope-related intracellular proteins. One of these proteins had a molecular mass consistent with that of the unglycosylated SIV-PBj14 SU protein (63 kDa); the second protein had a

higher molecular mass (> 160 kDa). Characterization of this larger protein revealed that it was glycosylated and possibly represented a dimer of the SU protein. A pulse-chase analysis of cells infected with vIC-SIV-PBj14 SU demonstrated that a 110- to 130-kDa

protein was released, which is consistent with the molecular mass of the

SIV-PBj14 SU protein. The results of these studies demonstrate that poliovirus replicons can be used to express foreign proteins, including glycoproteins, which retain many of the physical features of the native protein.

L10 ANSWER 14 OF 16 TOXLIT

AN 1996:63025 TOXLIT

DN CA-124-167506K

TI Eukaryote transduced with retrovirus vector particle containing envelope protein, ltr, and therapeutic agent and use of vector for gene therapy.

AU Vanin EF; Nienhuis AW

SO (1995). PCT Int. Appl. PATENT NO. 95 34639 12/21/95 (United States Dept.

of Health and Human Services).

CY United States

DT Patent

FS CA

LA English

OS CA 124:167506

EM 199605

AB A retroviral vector which includes a nucleic acid sequence encoding a retroviral envelope. The nucleic acid sequence encoding a retroviral envelope includes a first nucleic acid

sequence encoding a first envelope portion which is a portion of MCF viral gp 70 protein, a nucleic acid sequence which encodes xenotropic envelope, a nucleic acid sequence which encodes an amphotropic envelope portion, and a nucleic acid sequence which encodes p15E protein. Such retroviral envelopes encoded by

such nucleic acid sequence may be included in infectious viral particles. The infectious viral particles also may include gene(s) encoding therapeutic agents, and thus may be used in gene therapy.

L10 ANSWER 15 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1994-14185 BIOTECHDS

TI Use of HIV virus protein-R and nucleic acid; use of vpr fusion protein in therapy or DNA in gene therapy; retro virus multiplication enhancement in cell culture

PA Weiner D B

PI WO 9419456 1 Sep 1994

AI WO 1994-US2191 22 Feb 1994

PRAI US 1993-167608 15 Dec 1993; US 1993-19601 19 Feb 1993

DT Patent

LA English

OS WPI: 1994-294323 [36]

AB A new method for inducing differentiation involves contacting undifferentiated cells with HIV virus vpr protein (virus protein-R) or a fragment, or introducing vpr DNA. Compounds which inhibit vpr from

stimulating differentiation, or from binding to p55, p24, p15, p7 or p6 protein, may be identified by contacting undifferentiated cells or target protein with vpr protein in the presence and absence of the test compound. Compounds which inhibit p24 protein binding to p15 or

p7 protein, or inhibit p24 aggregation, may be identified by determining binding or aggregation in the presence of a test compound. Retro virus multiplication in a cell culture may be enhanced by adding vpr protein in conjunction with retro virus infection. A new drug delivery particle comprises vpr, p24 and a non-HIV cell-type specific envelope protein. A new fusion protein comprises a biologically active portion linked to a p24-binding vpr fragment, and is encoded by DNA on an expression vector. The vpr or DNA may be used in therapy or gene therapy of e.g. cancer, psoriasis, autoimmune disease, granuloma, Parkinson disease, etc. (114pp)

L10 ANSWER 16 OF 16 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD

AN 1991-02003 BIOTECHDS

TI Invasive microorganisms;

comprising non-invasive Escherichia coli transformed with Yersinia pseudotuberculosis, Yersinia enterocolitica or Salmonella ail or inv gene; potential application as live vaccine

PA Leland-Stanford-Jr.Univ.

PI WO 9012867 1 Nov 1990

AI WO 1990-US2131 18 Apr 1990

PRAI US 1989-340375 19 Apr 1989

DT Patent

LA English

OS WPI: 1990-348470 [46]

AB An invasive microorganism (I) is claimed which comprises a microbial host

lacking natural invasive capacity and a DNA construct containing an ail

or inv gene, encoding a single membrane protein imparting an invasive

phenotype to the host, and an extra envelope, capsid or surface membrane gene joined to a vector. The host is Escherichia coli and the ail gene is homologous to ail from Yersinia enterocolitica or Yersinia pseudotuberculosis or derived from Salmonella sp.. Also claimed

are: a recombinant vaccine comprising (I) and a carrier; DNA probe encoding the ail gene comprising less than 50 kb of naturally occurring

chromosomal flanking sequences; DNA comprising transcriptional and translational initiation and termination regulatory regions and the ail gene; a method for determining virulence of a Yersinia strain; a

particle non-diffusibly coated with ail protein;

a method for binding cells to a surface; and a method for preparing a bacterial vaccine having invasive capability. (I) can be used to introduce exogenous molecules into mammalian cells using unicellular microorganisms as a vehicle. (69pp)

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	27.35	93.92

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	ENTRY SESSION
CA SUBSCRIBER PRICE	0.00	-3.90

STN INTERNATIONAL LOGOFF AT 14:56:55 ON 23 MAR 2000

(FILE 'HOME' ENTERED AT 14:39:52 ON 23 MAR 2000)

FILE 'MEDLINE, AIDSLINE, CAPLUS, EMBASE, SCISEARCH, JICST-EPLUS, JAPIO'
ENTERED AT 14:40:06 ON 23 MAR 2000

L1 1049 S PROTEIN (W) "A" AND IGG(W)BIND?
L2 0 S L1 AND VIRAL (W) VECTOR
L3 1049 S PROTEIN (W) "A" AND IGG (W) BIND?
L4 6 S L3 AND VIRAL AND VECTOR
L5 1 S IGG (W) BIND? AND VECTOR AND TRANSDUCE AND CELL#
L6 18 S "PROTEIN A" AND VECTOR AND ENVELOPE AND PARTICLE#
L7 8 DUP REM L6 (10 DUPLICATES REMOVED)

INDEX 'ADISALERTS, ADISINSIGHT, AGRICOLA, AIDSLINE, ANABSTR, AQUASCI,
BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO,
CABA,
CANCERLIT, CAPLUS, CEABA, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU,
DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 14:49:28 ON 23 MAR
2000

SEA "PROTEIN A" AND VECTOR AND ENVELOPE AND PARTICLE#

1 FILE AIDSLINE
1 FILE BIOC
4 FILE BIOSIS
11 FILE BIOTECHABS
11 FILE BIOTECHDS
5 FILE BIOTECHNO
1 FILE CANCERLIT
6 FILE CAPLUS
2 FILE CEABA
10 FILE DGENE
5 FILE EMBASE
3 FILE ESBIOBASE
26 FILE IFIPAT
2 FILE LIFESCI
3 FILE MEDLINE
3 FILE SCISEARCH
5 FILE TOXLIT
723 FILE USPATFULL
56 FILE WPIDS
56 FILE WPINDEX

L8 QUE "PROTEIN A" AND VECTOR AND ENVELOPE AND PARTICLE#

FILE 'BIOTECHDS, BIOTECHNO, ESBIOBASE, LIFESCI, TOXLIT' ENTERED AT
14:54:07 ON 23 MAR 2000

L9 26 S L8
L10 16 DUP REM L9 (10 DUPLICATES REMOVED)